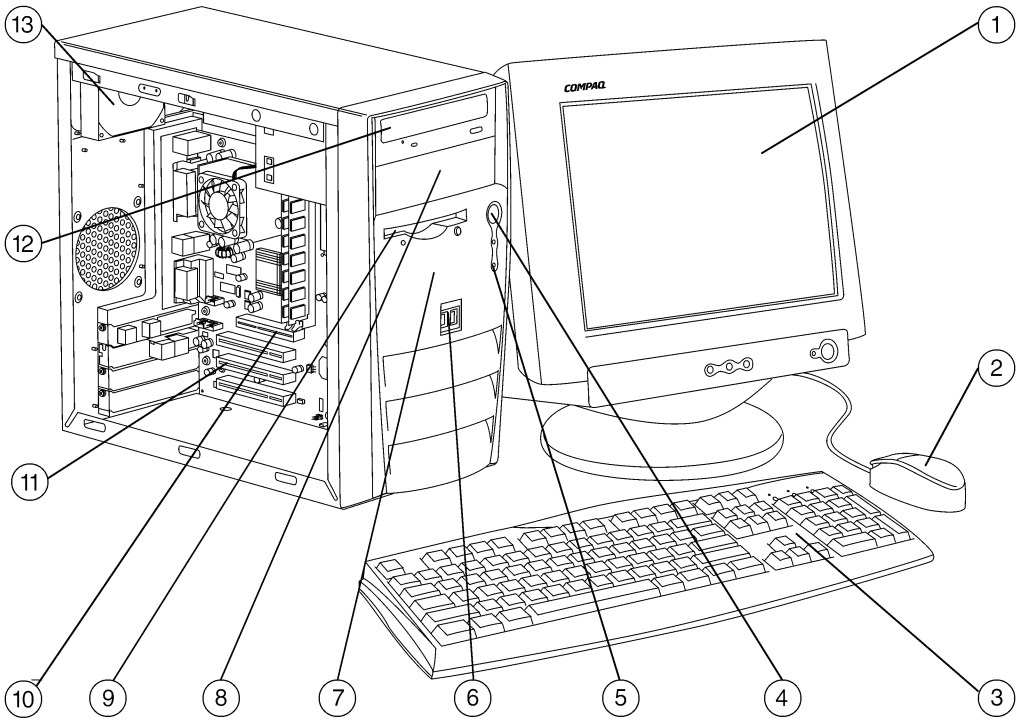
Overview

What's New

- Intel® 845G chipset
- DDR Synch Dram PC2100 (266-MHz) Memory
- USB 2.0
- 6 USB ports standard, including 2 front access ports
- Integrated Intel Extreme Graphics - 4X AGP

At A Glance

- Intel®Pentium® 4 and Celeron™ processors
- Microsoft XP Home or XP Pro operating systems
- Integrated Intel PRO/100 NIC
- Energy Star compliant with energy-saving features
- Protected by Compaq Services, including a 1-1-1 standard warranty. Certain restrictions and exclusions apply.



1. Compaq 5500 CRT Monitor (sold separately)
2. 2-Button Scroll Mouse
3. 104-Key Windows Keyboard
4. Dual-State Power Button
5. LED Indicators
6. USB Ports
7. Ultra ATA/100 Hard Drive
8. 5-1/4 Inch Expansion Bay
9. 1.44-MB Diskette Drive
10. AGP Graphics Slot
11. PCI Expansion Slots
12. 48X CD-ROM Drive
13. 250-Watt Power Supply

Standard Models and Descriptions

Pre-Configured Models

Model Key

Example:	**D31vm/C17/20/x/128c**	
	D31vm =	Evo D310v Microtower
	C1.7 =	Celeron 1.7GHz processor
	20 =	Hard Drive, 5400rpm
	128 =	Memory, PC133 SDRAM
	c =	48X CD-ROM
	r =	48X CD-RW
	x =	Microsoft® Windows XP Home
	k =	Microsoft Windows XP Professional

Part number	**Short description**	**Long description**
305420-121	D31vm/C17/20/x/128c	Evo D310v Microtower, Intel 845G chipset, Intel Celeron 1.7Ghz Processor, 400MHz Front Side Bus, Integrated Intel Extreme Graphics, 128MB PC2100 DDR, 20GB Ultra ATA100 Hard Drive (5400 rpm), 48X CD-ROM, Integrated Intel Pro networking, Integrated AC97 Audio (optional speakers), Microsoft Windows XP Home, Compaq Enhanced Keyboard, Compaq 2-Button Mouse, 1-1-1 limited warranty.
290179-121	D31vm/C17/20/k/128c	Evo D310v Microtower, Intel 845G chipset, Intel Celeron 1.7Ghz Processor, 400MHz Front Side Bus, Integrated Intel Extreme Graphics, 128MB PC2100 DDR, 20GB Ultra ATA100 Hard Drive (5400 rpm), 48X CD-ROM, Integrated Intel Pro networking, Integrated AC97 Audio (optional speakers), Microsoft Windows XP Professional, Compaq Enhanced Keyboard, Compaq 2-Button Mouse, 1-1-1 limited warranty.
290435-121	D31vm/P18/20/k/128c	Evo D310v Microtower, Intel 845G chipset, Intel Pentium 4 1.8Ghz Processor, 400MHz Front Side Bus, Integrated Intel Extreme Graphics, 128MB PC2100 DDR, 20GB Ultra ATA100 Hard Drive (5400 rpm), 48X CD-ROM, Integrated Intel Pro networking, Integrated AC97 Audio (optional speakers), Microsoft Windows XP Professional, Compaq Enhanced Keyboard, Compaq 2-Button Mouse, 1-1-1 limited warranty.
305474-121	D31vm/P18/40/k/256cr	Evo D310v Microtower, Intel 845G chipset, Intel Pentium 4 1.8Ghz Processor, 400MHz Front Side Bus, Integrated Intel Extreme Graphics, 256MB PC2100 DDR, 40GB Ultra ATA100 Hard Drive (5400 rpm), 48X/12X/48X CD-RW, Integrated Intel Pro networking, Integrated AC97 Audio (optional speakers), Microsoft Windows XP Professional, Compaq Enhanced Keyboard, Compaq 2-Button Mouse, 1-1-1 limited warranty.
306499-128	French keyboard kit	The D310v sku noted above skus will be preinstalled with an English image but will have dual Restore CD's (English and French). The French keyboard kits (which will include French keyboard only) must be ordered separately.

Standard Features

Compaq Evo D310v Models with Intel 845G Chipset

Processor and Speed *One of the following*	**Intel Celeron Processors** 1.7-GHz with 400-MHz Front Side Bus	**Standard L2 Cache**	128-KB Integrated ECC
	Intel Pentium 4 Processors 1.8-GHz with 400-MHz Front Side Bus	**Standard L2 Cache**	256-KB Integrated ECC
Hard Drives *One of the following*	20-GB 5400 rpm Ultra ATA/100 40-GB 5400 rpm Ultra ATA/100		
Standard Memory *One of the following*	128-MB DDR Synch Dram PC2100 (266-MHz) Non ECC 256-MB DDR Synch Dram PC2100 (266-MHz) Non ECC		
Removable Storage	1.44-MB Diskette Drive		
Optical Storage *One of the following*	48X CD-ROM Drive 48X/12X/48X CD-RW Drive		
Keyboard	Compaq Enhanced Keyboard		
Mouse	Compaq Scroll Mouse		
Audio	Integrated AC '97 Audio *(optional external speakers required)*		
NIC	Integrated Intel PRO/100 Network Connection		
Graphics	Integrated Intel Extreme Graphics		
Operating System *One of the following*	Microsoft Windows XP Home Microsoft Windows XP Professional		

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

Base Unit Contents	uATX microtower chassis	
	Intel processor: Celeron or Pentium 4	
	Active heatsink	
	Systemboard with Intel 845G chipset, Intel Pro/100 NIC, integrated graphics and audio	
	(2) ATA data cables	
	Diskette drive with cable	
	20.0GB 5400rpm HDD	
	Optical Disc drive	
	DDR Synch DRAM PC2100 memory DIMM	
	Product Documentation on CD	
	Microsoft operating system CD	
	Compaq Restore CD	
	Power Cord	
	Keyboard (PS/2)	
	Mouse (PS/2)	
Expansion Capability	Memory Expansion Slots (Non-ECC)	2 DIMM's - DDR Synch Dram PC2100 (266-MHz)
	Maximum Memory	2-GB

Note: Intel 845G Chipsets support DDR Synch Dram PC1600 (200-MHz) Non-ECC and DDR Synch Dram PC2100 (266-MHz) Non-ECC Memory only. Compaq PCs ship with DDR Synch Dram PC2100 (266-MHz) Non-ECC Memory.

Slots	PCI	3 full-height slots on PCA
	AGP	1 AGP 4X, 1.5V on PCA
Bays	Total Bays = 4	
	Internal	(1) 3.5 inch Hard Drive
	External:	(2) 5.25 inch half-height
	Floppy:	(1) 3.5 inch Diskette Drive
Wireless Support	PCI card or external USB	
USB Support	(2) Front USB 2.0 Ports	
	(4) Rear USB 2.0 Ports	
Interfaces (Legacy)	Parallel Port	1
	Serial Port	1
	PS/2 Keyboard	1
	PS/2 Mouse	1
	VGA Adapter	1

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

Chassis Dimensions (H x W x D)	Centimetres	35.42 x 18 x 40.5 centimetres
	Inches	13.94 x 7.08 x 15.94 inches
Chassis Weight (kg/lb)	System Weight	10.92 kilograms/23.8 pounds
	Weight Supported	45.5 kilograms/100 pounds
Shipping Box Dimensions (H x W x D)	Centimetres	27.94 x 49.53 x 106.78 centimetres
	Inches	11.0 x 19.5 x 21.5 inches
Shipping Box Weight	12.7 kilograms/28 pounds	
System Memory	Type/Speed	DDR Synch Dram PC2100 (266-MHz) Non-ECC
	Maximum Memory	2-GB
	Memory Parity	Not Needed for non-ECC
	ECC Memory	Not Supported by chipset
	Serial Presence Detect Support	Supported

Note: Maximum memory of 2-GB DDR Synch Dram can be achieved when 1-GB memory modules become available.

Supported Features	Processor	Intel Pentium 4 and Celeron/Socket N - 478
	CPU Bus Speed Supported	400-MHz/533-MHz FSB
	Memory Type Supported	DDR (ECC not supported by Chipset)
	Memory Speed Supported	DDR Synch Dram PC1600 (200-MHz) and PC2100 (266-MHz) Non-ECC
	SPD Support	Yes
	Hard Drive Interfaces Supported	SMART III Ultra ATA/100/66/33
	Hard Drive Controller (PCI) Supported	SMART III Ultra ATA/100/66/33
Intel Pentium 4	Coprocessor	Integrated
	CPU Socket Type/Number	Socket N 478 pin
	CPU Package	FC-PGA2
	Front Side Bus Speed	400-MHz or 533-MHz
	Standard L2 Cache	256-KB ECC or 512-KB ECC depending on processor speed
	L2 Cache Architecture/Speed	Full core clock speed
	Cache Upgradeable To	Not upgradeable - Integrated into Processor
Intel Celeron	Coprocessor	Integrated
	CPU Socket Type/Number	Socket N 478 pin
	CPU Package	FC-PGA2
	Front Side Bus Speed	400-MHz
	Standard L2 Cache	128-KB ECC depending on processor speed
	L2 Cache Architecture/Speed	Full core clock speed
	Cache Upgradeable To	Not upgradeable - Integrated into Processor

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

System Board	Architecture	P4/PCI/AGP 4X
	Chipset	Intel 845G Chipset
	I/O Controller	Super I/O 3
	System Board Form Factor	Standard uATX
	Processor Socket - 478 Pin ZIF	Yes
	DIMM Connectors (2.5V)	Yes (2)
	AGP Connector (1.5V)	Yes (1)
	Integrated AGP Graphics	Yes
	PCI Connectors (5.0V)	Yes (3 on motherboard)
	Flash ROM	Yes
	Audio	Yes
	CD ROM IN (Audio)	Yes
	Clear CMOS	Yes
	CPU Fan Header	Yes
	Chassis Fan Header	Yes
	Chassis Speaker Header	Yes
	CMOS Battery Holder - Lithium	Yes
	Hood Lock Header	No
	Hood Sense Header	No
	Multibay Header	No
	Multport Header	No
	NIC (PRO/100 VM)	Yes
	Wake-On-Lan®	Yes
	Alert-On-LAN®	No
	Power Supply Header	Yes
	Power Switch, Power LED & Hard Drive LED Header	Yes
	Password Clear Header	Yes
	Riser Connector	No
	SCSI LED Header	Yes
	Boards that connect to System Board	None

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

Chassis	Colour	Carbon
	Supported System Board Form Factor	Standard uATX
	Flash ROM	Yes
	Cooling Solutions Supported	
	Power Supply Fan (Variable Speed)	Yes
	Processor Fan-Heatsink (Variable Speed)	Yes
	Chassis Fan	Yes
	Slots Supported	3 Full-height, half-length PCI slots
		1 AGP
	Front I/O	2 USB
	Rear I/O	Standard ATX I/O Connectors
	Internal Speaker	No
	Power Supply	ATX Power Supply – PFC/Non PCF with a 115v/230v line switch
Interfaces	I/O Chip	Super IO 3
	Serial Port/UART Type	One Serial Port/SN75185
	Parallel Port	One Parallel Port
	USB (2.0)	6 ports (USB 2.0) total 4 rear/2 front
	Infrared Port	No
	Network	RJ-45
	Keyboard	Yes (PS2)
	Mouse	Yes (PS2)
	Multibay	No
	Multiport	No
	Video	Yes
	Audio	Yes

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

Power Supply	Power Supply	ATX Power Supply – PFC/Non PCF with a 115v/230v line switch
	Full Ranging Input (No Line Select Switch)	No
	Active Power Factor Correction (APFC) (Input Current is nearly 1/2 a non-APFC PS)	No
	Passive Power Factor Correction (PFC)	Yes (with line switch set to 230v - No PFC in 115v line switch position)
	Operating Voltage Range	90 to 132VAC, or 180 to 264VAC
	Rated Voltage Range	100 to 127 VAC, or 200 to 240VAC
	Rated Line Frequency	50-60 Hz
	Operating Line Frequency Range	47-63 Hz
	Rated Input Current	6A @ 100VAC/3A @ 200VAC
	Maximum Rated Power	250W
	Heat Dissipation	Max (338W input): 1061 BTU/hr Typical (65W input): 222 BTU/hr Max (269W input): 267 kg-cal/hr Typical (65W input): 56 kg-cal/hr
	PS Fan	92mm fan integrated in power supply - variable speed for optimum acoustics
	Processor Fan	Variable speed fan
Environmental and Mechanical Engineering Support Centre	http://env-webserver.ccm.cpqcorp.net/EMESC/default.htm Note: This Web site is available in English only.	
Power Conservation 'Energy Saver'	Energy Star Compliant	Yes
	APM 1.2 Support	Yes
	Screen Blanking	Yes
	Hard Disk 'Idle' Mode	Yes
	System Idle Mode	Yes
	Cache Memory Power-Down	No
	Blue Angel Compliant (<5w in S5--Power Off)	Yes
	Power Consumption in ES Mode - Suspend to RAM (S3) (Instantly Available PC)	~2W
	Processor/Cache Memory Power-Down (S3)	Yes
	CD-Rom Spins Down when not in use	Yes

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

ROM Features	Instantly Available PC (Suspend to RAM - S3)	Yes
	ROM Based F10 Setup	Yes
	Remote System Installation via F12 (PXE)	Yes
	Failsafe Boot Block ROM	Yes
	Emergency ROM Flash Recovery with Video	Yes
	CMOS Archive and CMOS Restore	Yes
	Save and Restore CMOS Setup via Diskette	Yes
	Auto Setup when New Hardware Installed	Yes
	Serial, Parallel, USB Enable/Disable Port Control	Yes
	Removable Media Write / Boot Control	Yes
	Remote Boot from Server	Yes
	Network Server Mode	Yes
	Power-On Password	Yes
	Setup Password	Yes
	Memory Change Alert (Requires Insight Management Agent)	Yes
	Thermal Alert (Requires Insight Management Agent)	Yes
	Cover Removal Alert (Requires Insight Management Agent)	No
	Master Boot Record Security	Yes
	Remote ROM Flash	Yes
	Remote Wakeup and shutdown	Yes
	Power Management	Yes
	ACPI	Yes
	SMBIOS 2.3 x DMI (Desktop Management Interface)	Yes
	Wired for Management 2.0 Support	Yes

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

System Environmental Specs	Acoustics: Advanced Power Management - On	Idle (HDD spinning but not seeking) = 26 dB (pending final testing with production equipment)	
	Shock	Operating (*Using 11ms half-sine shock pulse)	5 G's*(with NO damage being incurred)
		Non-Operating (*Using 11ms half-sine shock pulse)	10 G's*, positive and negative directions front to back axis: 20 G's* in all other axes.
	Vibration	Operating	Random vibration at 0.000215 G^2/Hz, 10Hz to 300Hz, (0.25G's nominal).
		Non-Operating	Random vibration at 0.0005 G^2/Hz, 10Hz to 500Hz, (0.5G's nominal).
	Relative Humidity	Operating	10% to 90% relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.
		Non-operating	5% to 95% relative humidity (Rh), 38.7°C maximum wet bulb temperature, non-condensing.
	Altitude Max (un-pressurized)	Operating	0 to 10,000 feet – This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 1500 ft/min.
		Non-operating	0 to 30,000 ft 9,144 m - Maximum allowable altitude change rate is 1500 ft/min
	Environmental and Mechanical Engineering Support Centre (EMESC) - Intranet Web Site	http://env-webserver.ccm.cpqcorp.net/EMESC/default.htm Note: This Web site is available in English only.	
Software	Preinstalled Software	Windows 2000	No (drivers provided on http:\\www.Compaq.ca)
		Windows XP Pro	Yes
		Windows XP Home	Yes
		Microsoft Internet Explorer	Yes
Initial Configuration and Deployment	Support Software CD		Yes
	Compaq Software Restore CD		Yes
Standard Security Features	Serial, Parallel, Audio, USB Enable/Disable Port Control		Yes
	Removable Media Write/Boot Control		Yes
	Power-On Password		Yes
	Setup Password		Yes
System Software Updating	Remote ROM Flash		Yes
	ROM Based Setup (F10) and Start-up Diagnostics		Yes
	Support Software CD & Web site		Yes

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

Serviceability Features - System	Dual Colour Power LED on Front of Computer	Yes (Indicates Normal Operations and Fault Conditions)
	Blinking Diagnostic Keyboard LED Codes	Yes
	Diagnostic LED Explanation Table	Yes (See Illustrated Parts Map)
	Compaq Diagnostic for Windows Software	Yes
	Compaq Configuration Record Software	Yes
	Over-Temp Warning on Screen (Requires IM Agents)	Yes
	Compaq OS CD (Restore OS CD)	Yes
	Compaq Restore CD (Restore Drivers CD)	Yes
	Flash ROM	Yes
	3.3V Aux Power LED on System PCA	Yes
	Dual Function 5V Aux Power LED (ON) /PS_ON LED (OFF) on System PCA	Yes
	Diagnostic Power Switch LED on board	Yes (On when power switch pushed)
	Clear Password Jumper	Yes
	Clear CMOS Button	Yes
	CMOS Battery Holder for easy Replacement	Yes
	Processor ZIP Socket for easy Upgrade	Yes
	DIMM Connectors for easy Upgrade	Yes
	NIC LEDs (integrated) (Green & Amber)	Yes Green On = Network Activity; Amber On = 100Base-TX; Amber Off = 10Base-TX)
Serviceability Features – Web Based	Support Home - Help for Drivers, ROM, and Software, Documentation	http://www.compaq.com/support/home/
	Software & Drivers	http://www.compaq.com/support/home/
	Ask Compaq	http://www.compaq.com/support/home/
	Reference Library (Product Documents)	http://www.compaq.com/support/home/
	Forums and Communities	http://www.compaq.com/support/home/
	Warranty Information	http://www.compaq.com/support/home/
	Your System Hardware Look up your Hardware Auto Serial Number Detect	http://www3.compaq.com/support/parts/
	Support Tools	http://www3.compaq.com/support/tools/
	Contact Support	http://www3.compaq.com/support/parts/
	Compaq Active Update Support	http://www.compaq.com/products/servers/management/activeupdate/
	End User Replaceable Parts Program	http://www.compaq.com/support/eurp/
	Product Change Notification (PCN)	http://web14.compaq.com/pcn/pcnbridge.asp
	ActiveUpdate	http://web14.compaq.com/pcn/pcnbridge.asp
	Note: These Web sites are available in English only.	

Standard Features – Base Unit Details

Compaq Evo D310v Models with Intel 845G Chipset

Serviceability Features of Chassis	Dual Colour Power and HD LED - To Indicate Normal Operations and Fault Conditions	Yes
	Diagnostic LED Explanation Table	Yes (See Illustrated Parts Map)
	Smart Cover Sensor	No
	Smart Cover Lock	No
	Front power switch	Yes
	Green Pull Tabs, and Quick Release Latches for easy Identification	Yes
	System memory can be upgraded without removing the system board or any internal components	Yes
	Tool-less Hood Removal	Yes (with captive thumbscrews)
	Tool-less Hard Drive, CD & Diskette Removal	Yes
	Tool-less System Board Removal	No
	Industry Standard CD Bay	Yes
	Towerable	N/A
	Universal Tower Stand	N/A
Serviceability Features – Hard Drives	Drive Self Tests (DPS)	Yes
	DPS Access through F10 Setup during Boot	Yes
	DPS Access through Diagnostics for Windows	Yes
	SMART Technology (Self-Monitoring, Analysis and Reporting Technology)	Yes
	SMART I - Drive Failure Prediction	Yes
	SMART II - Off-Line Data Collection	Yes
	SMART III - Off-Line Read Scanning with Defect Reallocation	Yes
Service and Support	On-site Warranty and Service Note 1: This one-year, limited warranty and service offering delivers one year of on-site, next business-day Note 2 service for parts and labour and includes free telephone support Note 3 24 x 7. Global coverage Note 2 ensures that any product purchased in one country and transferred to another, non-restricted country will remain fully covered under the original warranty and service offering. Note 1: Terms and conditions may vary by country. Certain restrictions and exclusions apply. Note 2: On-site service may be provided pursuant to a service contract between Compaq and an authorized Compaq third-party provider, and is not available in certain countries. Global service response times are based on commercially reasonable best effort and may vary by country. Note 3: Technical telephone support applies only to Compaq-configured, Compaq and Compaq-qualified, third-party hardware and software. Toll-free calling and 24 x 7 support may not be available in some countries.	

After-Market Options

Communications	***Modems***	
	Lucent V.90 56K PCI Win Modem	239137-001
	Compaq USB 56K Fax Modem	228141-001
Graphics	***2D Graphics***	
	NVIDIA Vanta 16-MB SDRAM AGP	239317-B21
	NVIDIA GeForce2 MX200 16-MB SDRAM AGP	251954-B21
	NVIDIA GeForce MX400 32-MB SDRAM AGP	227003-B21
Hard Drives & Controllers	***Ultra ATA/100 Hard Drives***	
	80-GB 7200 rpm SMART III Ultra ATA/100 Hard Drive with DPS	250020-B21
	40-GB 7200 rpm SMART III Ultra ATA/100 Hard Drive with DPS	201066-B21
	20-GB 7200 rpm SMART III Ultra ATA/100 Hard Drive with DPS	251974-B21
	Cables	
	2 Device IDE Cable	260626-B21
	Note: Cable required with D310v when configured with a 2nd removable storage drive	
Input/Output Devices	***Keyboards***	
	Compaq PS/2 Easy Access Keyboard (carbon/silver)	267145-008
	Compaq USB Smart Card Keyboard (carbon/silver)	267147-008
	Compaq Cordless Desktop (Keyboard and Mouse)	251385-008
	Mice	
	Compaq PS/2 Scroll Mouse (carbon)	170299-B22
	Compaq USB Scroll Mouse (carbon)	195255-B25
	Compaq USB Optical Scroll Mouse (carbon/silver)	265985-B21
Memory (DIMMs)	***266-MHz (PC2100) DDR DIMMs Non-ECC***	
	1-GB DDR Synch Dram PC2100 (266-MHz) Non-ECC	282436-B21
	512-MB DDR Synch Dram PC2100 (266-MHz) Non-ECC	282435-B21
	256-MB DDR Synch Dram PC2100 (266-MHz) Non-ECC	282434-B21
	128-MB DDR Synch Dram PC2100 (266-MHz) Non-ECC	282433-B21

After-Market Options

Monitors		
	TFTs	
	Compaq TFT1825 Monitor, Dual Mode (18-inch, Carbon/Silver)	296751-003
	Compaq TFT1720 Monitor, Dual Mode (17-inch, Carbon/Silver)	295926-003
	Compaq TFT1701 Monitor, Analog only (17-inch, Carbon/Silver)	292847-003
	Compaq TFT1520 Monitor, Dual Mode (15-inch, Carbon/Silver)	295925-003
	Compaq TFT1501 Monitor, Analog only (15-inch, Carbon/Silver)	301042-003
	CRTs	
	Professional Series	
	Compaq P1220 CRT Monitor (21-inch, Carbon/Silver)	244374-001
	Compaq P920 CRT Monitor (19-inch, Carbon/Silver)	244373-001
	Compaq P720 CRT Monitor (17-inch, Carbon/Silver)	244375-001
	Value Series	
	Compaq V7550 CRT Monitor (17-inch, Carbon/Silver)	261611-003
	Standard Series	
	Compaq S9500 CRT Monitor (19-inch, Carbon/Silver)	261615-003
	Compaq S7500 CRT Monitor (17-inch, Carbon/Silver)	261606-001
	Compaq S5500 CRT Monitor (15-inch, Carbon/Silver)	261602-001
	Compaq V7550 CRT Monitor (17-inch, Carbon/Silver)	261611-003
Multimedia	Labtec Spin-22 Speakers (carbon)	246637-001
	Altec Lansing ACS21 Speakers	194839-001
Optical Drives	***DVD-ROM Drives***	
	16X/40X DVD-ROM w/+ R read (carbon)	303123-B22
	CD-RW Drives	
	48X/12X/48X CD-RW Drive (carbon)	303125-B21
Security	BioTouch USB Fingerprint Reader – (carbon)	240238-B21

Memory

DDR SYNCH DRAM DIMM NON-ECC MEMORY

It is not necessary to add memory in pairs or kits. Memory upgrades are accomplished by adding single or multiple DIMMs of the same or varied sizes. This chart does not represent all possible memory configurations.

845G chipset (128-MB)

DDR SYNCH DRAM DIMM NON-ECC MEMORY

STANDARD MEMORY

128-MB DIMM Standard

MAXIMUM MEMORY

Intel 845G Chipset supports up to 2-GB of DDR SYNCH DRAM. Platform can utilize 2-GB of memory when 1-GB DIMMs are available with the installation of optional DDR SYNCH DRAM Memory Kits.

Memory		Slot	
		1	2
Standard	128-MB	128-MB	Empty
Maximum Memory when 1-GB available	2-GB	1-GB	1-GB

Note: All Compaq Evo D310v Desktop models contain two DIMM slots, but can only be upgraded to a maximum of 2-GB when 1-GB DDR SYNCH DRAM are available.

Note: 1-GB DDR SYNCH DRAM not currently offered as after-market options.

Note: It is not necessary to add memory in pairs or kits. Memory upgrades are accomplished by adding single or multiple DIMMs of the same or varied sizes. This chart does not represent all possible memory configurations.

845G chipset (256-MB)

DDR SYNCH DRAM DIMM NON-ECC MEMORY

STANDARD MEMORY

256-MB DIMM Standard

MAXIMUM MEMORY

Intel 845G Chipset supports up to 2-GB of DDR SYNCH DRAM. Platform can utilize 2-GB of memory when 1-GB DIMMs are available with the installation of optional DDR SYNCH DRAM Memory Kits.

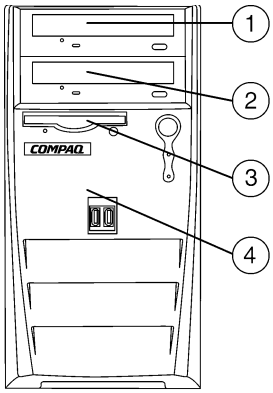
Memory		Slot	
		1	2
Standard	256-MB	256-MB	Empty
Maximum Memory when 1-GB available	2-GB	1-GB	1-GB

Note: All Compaq Evo D310v Desktop models contain two DIMM slots, but can only be upgraded to a maximum of 2-GB when 1-GB DDR SYNCH DRAM are available.

Note: 1-GB DDR SYNCH DRAM not currently offered as after-market options.

Note: It is not necessary to add memory in pairs or kits. Memory upgrades are accomplished by adding single or multiple DIMMs of the same or varied sizes. This chart does not represent all possible memory configurations.

Storage



COMPAQ EVO DESKTOP D310V - MICROTOWER DRIVE SUPPORT

	Maximum Quantity Supported	Position Supported	Controller
MICROTOWER			
Diskette Drives	1	3	Super I/O
Tape Drives	2	1,2	IDE
CD-ROM Drives	2	1,2	IDE
DVD-ROM Drives	2	1,2	IDE
CD-RW Drives	2	1,2	IDE
Ultra ATA/100 Hard Drives	Up to 3	1,2,4	Ultra ATA/100
SCSI Hard Drives	Up to 3	1,2,4	SCSI

Note: SCSI hard drives require installation of a SCSI adapter card.

Note: Adding additional tape drives, DVD-ROM, CD-RW or hard drives will require the removal of other devices.

Technical Specifications – Audio

Integrated ADI 1981A Audio	**Type**	Integrated
	AC '97 Stereo Codec	Yes
	OPL3 FM Synthesis Support	Yes
	Sound Blaster Compatibility	Yes
	Audio Jacks	Mic-In (20-K ohm Input Impedance) Line-In (12-K ohm Input Impedance) Line-Out * (less than 800 ohms Output Impedance, expects at least a 10-K ohm load) Headphone-Out (2.5 Ohms Output Impedance, expects at least a 32 ohm load)
	Note: *Internal Speaker Amplifier is for Internal Speaker only. External Speakers need to be powered externally.	
	Sampling	7KHz-48KHz
	Compression	ADPCM, ESPCM
	Wavetable Syntheses (software)	Yes
	3D Positional Sound	No
	Analog Audio:	
	Number of Channels on Line-Out (mono/stereo)	Stereo (Left & Right channels)
	Internal Audio Speaker Power Rating	3W
	Internal Tuned Port Speaker	Yes
	External Speaker Jack (Line-Out)	Yes

Technical Specifications – Communications

Integrated Intel PRO/100 VM Network Connection with WOL

Manufacturer	Intel	
Interface	Intel SingleDriver™ technology (10/100-Mbps support)	
Connector	RJ-45	
Expansion bus architecture	PCI 2.2	
Configuration	Network transfer rate	10BASE-T (Half-Duplex) 10 Mbps
		10BASE-T (Full-Duplex) 20 Mbps
		100BASE-TX (Half-Duplex) 100 Mbps
		100BASE-TX (Full-Duplex) 200 Mbps
	Data interface	PCI, 32-bit bus mastering
	I/O address	Integrated connectivity with Intel I/O Controller Hub (ICH2)-based platforms
Software support	Instrumentation support for CIM/WBEM SNMP, DMI, PXE 2.0, Intel PROSet utility for installation and configuration, Alert on LAN Software Developer Kit and same code	
Remote wakeup	PME through PCI 2.2, no cable required	
Boot PROM support	Yes, Intel PRO/100 Boot Agent (PXE 2.0, RPL)	
Special features	Digital adaptive equalization control, link status interrupt capability, boundary scan support, 3-port LED support (speed, link, activity), 10BASE-T auto polarity correction, diagnostic loopback mode, 1:1 transmit transformer ratio support, automatic detection of unplugged mode, remote monitoring (alerting)	
Proactive alert technology	Alert on LAN (transmit functionality only)—requires Management Console software such as HP OpenView and Altiris, alert utilities for the management console, proxy client software, client configuration software	
F12 BIOS support	Yes	
Environmental requirements	Operating temperature	32° to 131° F (0° to 55° C)
	Operating humidity (non-condensing)	85% at 131° F (55° C)
	Altitude	10,000 feet (3,048 metres)
	Non-operating temperature	-40° to 158° F (-40° to +70° C)
	Altitude	5,000 feet (15,240 metres)
Power	300 mW typical in active transmit mode; reduced power in unplugged mode (<50 mW); 3.3 V device	
Power management	ACPI 1.0	
Flash package	48-pin Shrink Small Outline Package (SSOP)	
Network management	PCI 2.2	
LED indicators	Three-port support (speed, link, and activity)	
Standards compliance	IEEE 802.2, IEEE 802.3 and IEEE 802.3u, (100-Mbps ethernet), SCO UnixWare OpenDesktop and OpenServer, PC'99	

Technical Specifications – Graphics

Intel Extreme Graphics
(Integrated with Intel 845G chipset)

Bus Type	Integrated
AGP Interface	Supports a single 1.5v Accelerated Graphics Port Interface, Specification 2.0 compliant device
	Supports 1x/2x/4x data transfers and 2x/4x fast writes
	32-deep AGP request queue
	AGP signals multiplexed with two DVO ports
	Supports ADD (AGP Digital Display) cards
Core frequency	200-Mhz
3D setup and render engine	Discrete Triangles, Strips, and Fans support
	Indexed vertex and flexible vertex formats
	Pixel accurate fast scissoring and clipping operation
	Backface culling support
	Supports D3D and OGL pixelization rules
	Anti-aliased lines support
	Spirte points support
High quality texture engine	Per pixel perspective corrected texture mapping
	Single pass texture compositing (multi-textures) at rate
	12 levels of detail MIP map sizes from 1x1 to 2Kx2K
	All texture formats including 32-bit RGBA
	Alpah and luminance maps
	Texture chroma-keying
	Bilinear, trilinear and anisotropic MIP-mapped filtering
	Cubic environment reflection mapping
	Embossed bump-mapping
	DOT3-based bump-mapping
	DXTn texture decompression
	FXT1 texture decompression
3D graphics rasterization enhancements	200 megapixel/sec fill rate
	Flat and Gouraud shading
	Colour alpha blending for transparency
	Vertex and programmable pixel fog and atmospheric effects
	Colour specular lighting
	Z Bias support
	Dithering
	Anti-Aliasied lines
	16 and 24 bit Z buffering
	16 and 24 bit W buffering
	8 bit stencil buffering
	Double and triple render buffer support
	16 and 32 bit colour
	Destination alpha
	Maximum 3D resolution supported 1600 x 1200 x 32 @ 85Hz
	Fast clear support

Technical Specifications – Graphics

Intel Extreme Graphics
(Integrated with Intel 845G chipset)
(continued)

2D Graphics	Optimized 256 bit BLT (Block Transfer) Engine
	GDI+ feature support
	Alpha stretch blither
	Anti aliased lines
	32-bit alpha blended cursor
	Programmable 3-colour transparent cursor
	Colour space conversion
	8, 16, and 32 bit colour
	ROP support
Video DVD/PC-VCR	Dynamic Bob and Weave support for video streams
	Synclock display and TV out to video source
	Source resolution up to 720 x 480 with 2 vertical taps
	Software DVD at 30 fps (frames per second), full screen
Video Overlay	Single scalable overlay
	Multiple overlay functionality provided via stretch blitter (PIP, video conferencing, etc.)
	5 tap horizontal, 2 tap vertical filtered scaling
	Independent gamma correction
	Independent brightness/contrast/saturation
	Independent tint/hue support
	Destination colour keying
	Source chroma keying
	Maximum source resolution: 720 x 480 (576)
	Maximum overlay display resolution: 1600 x 1200 x 32 @ 60Hz, 1280 x 1024 x 32 @ 85hz.
Display	Analog display support
	350Mhz integrated 24-bit RAMDAC
	Up to 2048 x 1536 @ 60Hz refresh
	Hardware colour cursor support
	DD2CB compliant interface
	Multiplexed digital display channel
	Two channels multiplexed with AGP
	165Mhz dot clock on each 12 bit interface
	Can combine two 12 bit channels to form one 24 bit channel
	Supports flat panels up to 2048 x 1536 @ 60Hz or dCRT/HDTV @ 1920 x 1080 @ 85Hz.
	Supports hot plug and display
	Supports LVDS, TMDS transmitters or TV-out encoders
	ADD card utilizes AGP connector
	Three Display Control Interfaces (I2C/DDC) multiplexed on AGP

Refresh Rate with Memory Indicated

Resolution (Horizontal x Vertical)	Colour Depth (Bits per Pixel)	Refresh Rate (Hz)
640 x 480	8,16 and 32	85, 85 and 85
800 x 600	8,16 and 32	85, 85 and 85
1024 x 768	8,16 and 32	85, 85 and 85
1280 x 1,024	8,16 and 32	85, 85 and 85
1600 x 1200	8,16 and 32	85, 85 and 85
1900 x 1440	8,16 and 32	75, 75 and N/A

Technical Specifications – Hard Drives

5400 rpm SMART III Ultra ATA/100 Hard Drives	**40-GB**	**Capacity**	40,000 MB	
		Rotational Speed	5400 rpm	
		Interface	Ultra ATA/100	
		Transfer Rate Synchronous (Maximum)	66 MB/s	
		Height	1 in/25.4 mm	
		Width	3.5 in/88.9 mm	
		Seek Time (typical reads, including settling)	Single Track	1.5 ms (2.9 ms quiet seek)
			Average	10.5 ms (12.4 ms quiet seek)
			Full-Stroke	23 ms (23 ms quiet seek)
		Physical Configuration	Logical Blocks	39,102,336
		Operating Temperature	41° to 131°F/5° to 55°C	
	20-GB	**Capacity**	20,000 MB	
		Rotational Speed	5400 rpm	
		Interface	Ultra ATA/100	
		Transfer Rate Synchronous (Maximum)	66 MB/s	
		Height	1 in/25.4 mm	
		Width	3.5 in/88.9 mm	
		Seek Time (typical reads, including settling)	Single Track	1.5 ms (2.9 ms quiet seek)
			Average	10.5 ms (12.4 ms quiet seek)
			Full-Stroke	23 ms (23 ms quiet seek)
		Physical Configuration	Logical Blocks	39,102,336
		Operating Temperature	41° to 131°F/5° to 55°C	

Technical Specifications – Input/Output Devices

Compaq Enhanced 104-key Keyboard	**Dimensions** (HxWxD)	34 x 460 x 170 (mm) 1.34 x 18.11 x 6.69 (inches)	
	Weight	0.86 kg 1.90 lbs.	
	Electrical	Operating Voltage	Voltage supplied to keyboard is 5 Vdc (±0.25)
		Current Consumption	Under normal 5Vdc power supplied, typical current consumption is 50mA ±10% for the EMC IC with three LEDs
		Power Consumption	Under normal operation, Power Consumption is less than 0.30W
		Level and Timing	Level and timing of signals presented on data and clock pins should be compatible with both TTL or MOS termination on IBM compatible host PC motherboard.
		Pin Out Connector	PS/2 6 Pin DIN connection
		Electrostatic Discharge Susceptibility	IEC 801-2 (Continued functionality) Contact discharge: 2, 4, 8 KV Air discharge: 2, 4, 8, 10,12, 15KV.
	Mechanical	Key Life	5 millions cycles under normal operation. After 5 millions return forces deviation less than 30% from original force.
		Cable Length	4.5 ft.
		Acoustics	Acoustic noise generated by key press should under 65dBA for space bar and 60dBA for other keys.
	Environmental	Operating Temperature	10 degree C to 50 degree C
		Non-operating Temperature	-30 degree C to 60 degree C
		Operating Humidity	Relative humidity under 90% without condensation
		Non-operating Humidity	Relative humidity under 95% without condensation
		Operating Shock	40g in 11ms duration
		Non-operating Shock	80g in 11ms duration
		Operating Vibration	Sinusoidal sweeps from 10 to 500 to 10Hz 0.5 octave/min. 2.0g peak acceleration
		Non-operating Vibration	Sinusoidal sweeps from 10 to 500 to 10Hz 0.5 octave/min. 4.0p peak acceleration

Technical Specifications – Input/Output Devices

Compaq 2-Button Scroll Mouse	**Scroll Wheel**	8 mm	
	Maximum Rotation Speed	30 mm/s	
	Switch Type	Light force micro-switch	
	Switch Life	1 million operations	
	Mechanical Life	Minimum 200,000 revolutions	
	Environmental	Operating Temperature	50° to 122° F/10° to 50° C
		Non-operating Temperature	–22° to 140° F/–30° to 60° C
		Operating Humidity	10% to 90% (non condensing at ambient)
		Non-operating Humidity	20% to 80% (non condensing at ambient)
		Operating Shock	40 g, 6 surfaces
		Non-operating Shock	80 g, 6 surfaces
		Operating Vibration	2 g peak acceleration
		Non-operating Vibration	4 g peak acceleration
	Electrical	Operating Voltage	+5VDC ± 10%
		Power Consumption	15mA
		System Consumption	PS/2 mini-din connector
		ESD	CE level 4, 15 kV air discharge
		EMI-RFI	Conforms to FCC rules for a Class B computing device
		PC98	Functionally compliant
	Mechanical	Resolution	400 ± 20% DPI
		Tracking Speed	10 in/s maximum
		Acceleration	100 in/s
		Switch Actuation	85 g nominal peak force
		Switch Life	1,000,000 operations (using Hasco modified tester)
		Cable Length	2 m
		PC98-99	Mechanically compliant
	Regulatory Approvals	UL, CSA, FCC, CE Mark, TUV, TUV GS, VCCI, BCIQ, C-Tick	

Technical Specifications – Optical Storage

48X CD-ROM Drive	**Interface**	ATAPI IDE	
	Data buffer	16.6 Mbps	
	Data transfer rate	Sustained—150 Kbps minimum (audio)	Variable (CD)—3,000 to 7,200 Kbps
	Disk rotation technology	CAV (Constant Angular Velocity)	
	Access time (ms)	Random: <100 ms	Full-stroke seek: <150 ms
	Average access time	< 80 ms	
	Cache buffer (standard/maximum)	128 KB	
	Disk formats read	Multi-session Photo CD, multi-read CD-ROM, CD text, audio CD, CD-I, CD-RW, CD-R, CD-Extra, CD-ROM XA	
	Disk formats written	None	
	Disk capacity (CD)	650 MB	
	Block size	Mode 1—2,048 bytes Mode 2—2,340/2,336 bytes CD-DA—2,352 bytes CD-XA—2,328 bytes	
	Diametre	12 cm; 8 cm	
	Thickness	1.2 mm	
	Track pitch	1.6 µm	
	Audio output level	Line-out—0.7 V @ 47 Kohm	Headphone—0.6 V @ 32 ohm
	Startup time	<7 seconds (typical); < 30 seconds with multi-session	
	Operating conditions	Temperature	41° to 113° F (5° to 45° C)
		Relative humidity	10% to 80%
	Dimensions (HxWxD, maximum)	1.7 x 5.9 x 8.2 inches (4.3 x 15.0 x 20.8 cm)	
	Weight	2.6 pounds (1200 g)	
	MPEG playback graphics solution support	None	

Technical Specifications – Optical Storage

40X CD-RW Drive

Interface	ATAPI IDE	
Media formats written	CD-R and CD-RW	
Media capacity	700 MB	
Write methods	Disc-at-once, track-at-once, session-at-once, fixed packet, and variable packet	
Recording/playing time	80 minutes	
Data transfer rates	Sustained	CD-RW write (1-4X media) —1,500 Kbps (4X)
		CD-RW write (4-10X media) —1,500 Kbps (10X)
		CD-RW read—1,500 Kbps (10X)
		Digital audio extraction (minimum) —1,500 Kbps (10X)
	Variable	CD-R write—2,400 to 4,800 Kbps (16X to 32X) (ZCLV)
		CD-ROM, CD-R read—1,500 to 6,000 Kbps (10X to 40X)
Data transfer modes	ATA PIO mode 4—16.7 Mbps	
	ATA multi-word DMA mode 2—16.7 Mbps	
	ATA UltraDMA mode 0—16.7 Mbps	
	ATA UltraDMA mode 1—24 Mbps mode 2—33 Mbps (default)	
Media formats read	audio, CD-ROM (modes 1 and 2), CD-ROM XA (mode 2, forms 1 and 2), single- or multi-session photo CD, CD-I, video CD, CD-text	
Access times	Random	< 120 ms typical
	Full stroke	< 200 ms typical
Start-up time	Single	< 7 seconds typical
	Multi-session	< 30 seconds typical
Stop time	< 4 seconds	
Block size	Mode 1—2,048/2,352 bytes	
	Mode 2, Form 1—2,048/2,328/2,336/2,340/2,352 bytes	
	Mode 2, Form 2—2,328/2,336/2,340/2,352 bytes	
	CD-DA—2,352/2,368 bytes	
Disc diametre	120 mm or 80 mm	
Track pitch	1.6 µm	
Disc loading mechanism	Half-height, tray load	
Operating conditions	Temperature	41° to 113° F (5° to 45° C) operating; –4° to 140° F
	Humidity	10% to 80%
Mounting orientation	Horizontal or vertical	
Dimensions	Fits in a standard 5.25-inch drive bay	
Weight	1.2 kg (2.6 pounds)	
Approvals/environmental	UL 94 and 1950, CSA, CE, FDA, FCC	

Technical Specifications – Removable Storage

1.44-MB Diskette Drive	**Diskette Size**	3.5 in.	
	LED Indicators (front panel)	Green	
	Read/Write Capacity per diskette (high/low density)	1.44 MB/720 KB	
	Drive Supported	One	
	Drive Height	One-third	
	Drive Rotation	300 rpm	
	Transfer Rate (high/low)	500/250 Kb/s	
	Bytes/Sector	512	
	Sectors/Track (high/low)	18/9	
	Tracks/Side (high/low)	80/80	
	Access Times	Track-to-Track (high/low)	3/6 ms
		Average (high/low)	169/94 ms
		Settling Time	15 ms
		Latency Average	100 ms

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